

## ABSTRACT OF THE INVENTION

The present invention is to provide a spectrum measurement system, which comprises a preamplifier for receiving input signals from a wireless communication device to be measured and pre-amplifying the same; a down  
5 converter coupled to the preamplifier for decreasing a frequency of the amplified signals to an IF; an IF filter coupled to the down converter for filtering the IF signals based on a predetermined frequency resolution and center frequency; a power meter coupled to the IF filter for measuring a power of the IF signals; and a PC coupled to the power meter, the PC being  
10 operative to read the measured power, convert the read measured frequency into a real frequency based on a created calibration table, and plot a frequency analysis graph with respect to the wireless communication device.